We Claim As Our Invention:

1. A voltage variable substrate comprising:

a self-supporting, curable insulative binder having an initial non-solid state and a cured solid state; and

conductive particles impregnated into the binder while in the non-solid state.

2. The voltage variable substrate of Claim 1, wherein the conductive particles have a bulk conductivity greater than 10 (ohm-cm)$^{-1}$.

3. The voltage variable substrate of Claim 1, wherein the conductive particles include a material selected from the group consisting of: nickel, carbon black, aluminum, silver, gold, copper and graphite, zinc, iron, stainless steel, tin, brass, and alloys thereof, and conducting organic materials, such as intrinsically conducting polymers.

4. The voltage variable substrate of Claim 1, wherein the curable binder includes one of an epoxy resin and a polyimide film.

5. The voltage variable substrate of Claim 1, wherein the curable binder includes a meshed fabric and an epoxy resin that impregnates the meshed fabric.

6. The voltage variable substrate of Claim 5, wherein the meshed fabric includes glass fibers.

7. The voltage variable substrate of Claim 1, which further comprises semi-conductive particles mixed with the conductive particles and the curable binder while in its non-solid state.

8. The voltage variable substrate of Claim 1, which further comprises semi-conductive particles and insulating particles mixed with the conductive particles and the curable binder while in its non-solid state.

9. The voltage variable substrate of Claim 1, which further comprises insulating particles mixed with the conductive particles and the curable binder while in its non-solid state.

10. The voltage variable substrate of Claim 1, which includes at least one additional substrate layer attached to the curable binder to form a multi-layer printed circuit board.

11. The voltage variable substrate of Claim 10, which includes a plurality of curable binders attached to the at least one additional substrate layer to form the multi-layer printed circuit board.

12. A voltage variable device comprising:

a voltage variable material ("VVM") that includes a self-supporting and curable insulative binder and conductive particles impregnated into the binder;

a first electrode attached to the VVM; and

a second electrode attached to the VVM and positioned so as not to contact the first electrode, wherein the electrical resistance between the first and second electrodes changes upon an electrostatic discharge event.

13. The device of Claim 12, wherein the first and second electrodes are attached to a single surface of the VVM.

14. The device of Claim 12, wherein the first and second electrodes are attached to different surfaces of the VVM.

15. The device of Claim 12, which includes a plurality of non-contacting electrodes that are attached to a single surface of the VVM.

16. The device of Claim 12, which includes a plurality of non-contacting electrodes that are attached to multiple surfaces of the VVM.

17. The device of Claim 12, wherein a pair of opposing ends of the VVM each attach to a termination, wherein the termination electrically communicates with one of the electrodes.

18. The device of Claim 17, wherein the terminations are configured in a standard surface mount package size.

19. The device of Claim 17, wherein the terminations are lead-tin plated.

20. The device of Claim 10, wherein at least one of the electrodes includes nickel plated copper.

21. A voltage variable cable comprising:

a voltage variable material ("VVM") that includes a self-supporting and curable insulative binder and conductive particles impregnated into the binder;

a first conductor disposed within the VVM material;

a shield that wraps at least partially around the VVM material; and

a polymeric coating encasing the VVM material and the first and second conductors.

22. The voltage variable cable of Claim 21, wherein the VVM material is extruded about the first conductor.

23. A voltage variable device comprising:

a voltage variable material ("VVM") that includes a self-supporting and curable insulative binder and conductive particles impregnated into the binder;

a first electrode attached to the VVM;

a second electrode attached to the VVM; and

a gap between the first and second electrodes.

24. The voltage variable device of Claim 23, which further includes a protective coating that covers the gap.

25. A method for manufacturing voltage variable devices comprising the steps of:

preparing a sheet of a voltage variable material ("VVM") having a self-supporting and curable insulative binder and conductive particles impregnated into the binder;

coating the VVM sheet with a conductive layer;

etching a gap in the conductive layer;

forming a pair of slots in the VVM sheet so that the gap extends in an area between the pair of slots;

masking the gap in the area and leaving unmasked portions of the area adjacent to the pair of slots;

coating the unmasked portions with a solderable substance; and

dicing the area into a plurality of device shapes.

26. The method of Claim 25, wherein the VVM sheet defines two surfaces and which includes:

coating both surfaces of the sheet with the conductive layer;

etching a gap in the conductive layer on both surfaces;

masking both gaps, leaving unmasked portions on both surfaces; and

plating the unmasked portions of both surfaces with the solderable substance.

27. The method of Claim 25, wherein the conductive layer is a first conductive layer and which includes coating the first conductive layer with a second conductive layer.

28. The method of Claim 27, wherein the first conductive layer is copper and the second conductive layer is nickel.

29. The method of Claim 25, which includes the step of depositing a layer of copper by electroless deposition on the sheet before masking the gap.

30. The method of Claim 29, wherein the step of coating the unmasked portions with a solderable substance includes coating an unmasked portion of the electroless layer of copper with a layer of nickel followed by a layer of lead-tin.

31. The method of Claim 29, which includes the step of stripping the mask and chemically etching the electroless layer of copper from the VVM sheet, thereby exposing the gap, after coating the unmasked portions with a solderable substance.

32. The method of Claim 31, which includes the step of applying a protective coating to the gap.